Defensive equity

A defensive strategy to Canadian equity investing

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EXECUTIVE SUMMARY:

Over the last several years, academic studies have shown that low-volatility stocks have performed better from both an absolute and a risk-adjusted perspective. The majority of research published on the subject of defensive equity conveys that there has been no evidence of a risk premium for riskier stocks over the long-term. This phenomenon is not new and many of these studies have measured this anomaly over a variety of market cycles and conditions dating back as far as the 1920s. The historical outperformance of lower-risk equities is counter to Modern Portfolio Theory. However, it has presented an investment opportunity to construct portfolios that exhibit lower risk than the broad equity market, without sacrificing long-term performance.

The subject of defensive equity has been well researched and discussed from a global perspective. Yet Canadian investors, who often have significant domestic equity holdings, have a compelling motive to further explore the potential of defensive investing aligning with portfolio objectives. In this paper we take a closer look at the merits of introducing a defensive position within a Canadian equity portfolio.

- The appropriateness of an allocation to defensive equity will depend on alignment of the objectives and risk tolerance of the asset owner.
- We do not believe the investment community is in a position to predict whether the low-volatility anomaly (i.e. lower risk and higher returns) will persist in the future.
- However, we do believe that, over the long run, lower absolute volatility and superior risk-adjusted performance will continue to benefit investors at the total portfolio level.

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Among U.S. and global equity investors, low volatility and other types of defensive investing have generated a great deal of interest, driven by the elevated levels of volatility during the financial crisis. While some Canadian investors have benefited by having defensively positioned U.S. and global equity portfolios, much of the discussion associated with defensive investing has excluded the Canadian equity market. Perhaps the limited focus on Canadian equities makes sense for investors outside of Canada given that Canadian equities make up only about 3.5% of the global markets. However, most institutional investors in Canada have a significantly higher policy allocation to the Canadian equity market. This “home country bias” amounts to lower diversification and greater volatility over time and is what compels us to investigate the benefits of placing a greater emphasis on defensive investing for Canadian investors.

**Overexposure to Canada**

According to the Canadian Institutional Investment Network (CIIN)\(^1\), the average pension plan in Canada has 18% of their total assets allocated to Canadian equities at the end of 2012, which represents 41% of their total traditional equity exposure. The narrative is similar for non-profit firms: for instance, the average allocation to Canadian equities for university endowment funds in Canada was 27% of total assets in 2012\(^2\). This rather large home country bias increases the amount of systematic risk in a portfolio. Historically, this bias was driven by regulations limiting foreign holdings but now primarily exists because investors tend to allocate their assets to the market and currency with which they are most familiar. Our foremost belief is that institutions need to make further progress towards resolving home country bias in Canada. The good news is we are seeing many institutions evolving towards more diversified portfolios\(^3\). Yet, on average, because institutional asset owners continue to have significant exposure to the Canadian market, we believe there is value in assessing the appropriateness of having a defensive tilt in Canadian equity portfolios.

We often refer to adding a defensive mandate as a “tilt” within a broad asset class as we do not advocate that every investable asset should have a strict defensive mandate. Many implementation options for defensive equity in Canada are concentrated in nature and may focus on a subset of the market. Therefore, positioning a segment of the overall asset class (or “tilting”) to this type of strategy provides a better balance for reducing volatility while ensuring broad diversification.

In addition to domestic economic risk from an investment portfolio standpoint, many Canadian institutions often overlook the fact that their financial success is highly correlated with the main drivers in the Canadian economy. This correlation, while difficult to quantify and clearly entity-specific, is additive to the risk associated with having high domestic equity exposure in their investment portfolio. For example, if a company generates lower profits during broad-based declines in resource prices, the company may simultaneously be confronted with the difficulty of making appropriate pension contributions. During a period of reduced corporate profits the company may be forced to make larger contributions due to their reduced funding level, while also observing poor returns from their pension assets due to their high allocation to the resource-driven Canadian equity market. Thus, their funded position would be under fire from both the contribution and investment sides. This is a perfect example of how an institution could benefit from a more defensive structure in their Canadian equity portfolio.

**Systematic risk in the Canadian equity market**

Canadian equity investors are often faced with unique risk-return characteristics as a result of the more volatile cyclical sectors that carry a significant weight in the overall equity market.

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\(^1\) Source: An Overview of Pension Plans in Canada 2013, Sponsored by Invesco. Data used for analysis dates as of December 31, 2012.

\(^2\) Source: University Investment Survey 2013. CAUBO. Data used for analysis dates as of December 31, 2012.

\(^3\) Pension Investment Association of Canada published data shows Canadian equity allocations decline each year between 2009 and 2012.
Defensive stocks can therefore be a strategic diversifier for Canadian investors, in particular. The volatility associated with cyclical sectors tends to be higher, especially when global markets are experiencing elevated levels of risk. Exhibit 1 illustrates a pattern of rolling 3-year volatility over the last 20 years in the Canadian, U.S., and global equity markets. We can see that during lower absolute levels of volatility, or when volatility is broadly declining, there is less dispersion in the results. However, we also see that during rising or elevated levels of volatility, the Canadian equity market is driven to a higher absolute level of risk. It is during times of increased global risk resulting in market declines when investors most search for lower-volatility alternatives for their portfolios. Thus, the benefits that a defensive tilt would provide pay off when investors need it the most.

Exhibit 1: Pattern of rolling 3-year volatility over the last 20 years – Canadian, U.S. and Global equity markets

Defensive and dynamic stock indexes aid in analysis

As Canadian investors consider shifting to a more defensive portfolio in their home market, they will want to know if they are giving up return potential. While defensive stocks are generally less risky than other stocks, our research shows that long-term returns have tended to be higher. This means that historically there has been both an absolute return and risk-adjusted return advantage to being invested in defensive equity in Canada.

To further explore this effect, we will use the Russell Stability Index series. This divides the broad market into a defensive component and a dynamic component. This division is based in part on trailing volatility, but also takes into account three fundamental measures of risk: the variability of earnings, the debt-to-equity ratio (leverage) and the return on assets (a proxy for the strength of the business model).

Exhibit 2 shows the cumulative return series for the Canadian component of the Russell Dynamic and Defensive Indexes along with the S&P/TSX Composite Index. From the period of July 1996 to the end of 2013 the Russell Canadian Defensive Index substantially outperformed both the Russell Canadian Dynamic Index and the broad market and did so with meaningfully lower volatility. Over this 210-month period the standard deviation of the Russell
Canada Defensive Index, Russell Canada Dynamic Index, and the S&P/TSX Composite Index was 13.0, 22.4 and 15.8 respectively.

**Exhibit 2: Cumulative return series**

![Cumulative Returns Graph](Image)

While defensive stocks often underperform in strong secular growth markets, once again the real benefit is seen during volatile and down-trending markets. Over this same time period (July 1996 – December 2013), the upside capture of the Russell Canada Defensive Index was 88% while the Russell Canada Dynamic Index achieved a 121% upside capture ratio. This means when the broad market (S&P/TSX Composite) posted a positive monthly return, the defensive stocks achieved 88% of the return while dynamic stocks achieved 121% of the market return. However, during negative monthly return markets the defensive stocks only captured 59% of the decline while the dynamic stocks suffered 147% of the loss. Ensuring that downside risk is limited during periods of poor performance is one of the primary drivers of the strong cumulative returns. If a portfolio loses 20% of its value it will need to rise by 25% to attain the pre-loss value. So being able to preserve capital through declining markets is a significant factor in achieving strong long-term compounded returns.

**Upside and downside capture**

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<th>RUSSELL CANADA DEFENSIVE</th>
<th>RUSSELL CANADA DYNAMIC</th>
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<tr>
<td>Upside Capture</td>
<td>88%</td>
<td>121%</td>
</tr>
<tr>
<td>Downside Capture</td>
<td>59%</td>
<td>147%</td>
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Source: Russell Investments. Period: Jul 31 – Dec 31

Investors should note that our analysis focuses on historical long-term trends. Over short-term measurement periods we would not expect defensive equity to systematically provide significant alpha in all types of down markets. Defensive and low-volatility mandates in
Canada also tend to have concentrated holdings in certain sectors of the market. These sectors tend to behave more defensively over the medium to long term but have idiosyncratic short-term risks, akin to all return-seeking assets. For example, in June 2007, the Russell Canada Defensive Index maintained a substantial 54% of holdings in the financial services sector. When the global financial crisis was experienced in 2008 the Russell Canada Defensive Index fell by 32.7% for the year – just 26 basis points (bps) less than the S&P/TSX Composite.

Again, we would advocate for investors to examine the benefits of “tilting” their portfolio defensively rather than moving towards full defensive exposure in their Canadian equity portfolio, so as to avoid highly concentrated exposures. In summary, over a complete market cycle, defensive investing has displayed lower volatility and often superior returns, but as with all investment performance, these results have the ability to vary in the short term.

Risk-adjusted performance

The outperformance of defensive securities, from a risk-adjusted stance, over a long-term period can be seen in most economic regions. Global equities have witnessed strong risk-adjusted performance from the most defensive segment of the market as seen in Exhibit 3. The Sharpe ratio, a measure of risk-adjusted performance, shows the Russell Defensive Index in several geographies at a superior level relative to its Core and Dynamic counterparts. Yet, the magnitude of this advantage has been far greater in the Canadian market than in any other global region, further confirming the benefits of defensive investing for institutional investors in Canada.

Exhibit 3: Risk-adjusted performance – Global equities

Findings from academic research

Our conclusion that Canadian equities have historically benefited the most from lower-risk portfolios is also supported by the analysis of Frazzini and Pedersen (2011) in their working paper “Betting Against Beta”. This paper begins with the premise that higher-beta securities have produced a lower alpha across international equity markets, and then creates portfolios using systematic rules to go long low-beta stocks and short high-beta stocks in order to examine risk-adjusted performance. The study found that 19 out of 20 countries achieved positive excess returns using their long-short beta strategy, with Canada generating the largest excess return (1.66%) over the period from 1984 to 2009. The Sharpe ratio for the Canadian market of 0.86 was also materially higher than the other countries examined. While beta does not fully capture the characteristics of a defensive strategy, low beta portfolios are generally considered to be a fundamental metric for identifying defensive strategies.

Defensive index versus active universe

Defensive strategies should be compared to active management in addition to their passive benchmark. By doing so we can better understand the risk-return trade off for those asset owners who are currently managing active portfolios. The table below lists some key measurements for 40 quarters of data between Q4 2003 and Q3 2013 for both the Russell Canada Defensive Index and the Russell Investments universe of Canadian large cap managers. Examining the results, we see that over this period, the defensive strategy has largely been successful in achieving what it is expected to do. The defensive index displayed a lower beta, lower volatility, and slightly underperformed in up markets while outperforming in down markets. As we would expect, the tracking error (a measure of relative volatility, not absolute volatility) was significantly higher for the defensive index. This is because the only focus of the defensive strategy is to identify the subset of stocks that are most defensive, which results in being benchmark-agnostic (unlike active managers). While we see slight defensive benefits on average associated with active managers, the defensive strategy is more closely linked to what investors mean when they talk of limiting “downside risk”.

Russell Canada Defensive Index and Russell Investments universe of Canadian large cap managers - Key measurements Q4 2003 – Q3 2013

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<thead>
<tr>
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<th>RUSSELL CANADA DEFENSIVE</th>
<th>CANADIAN LARGE CAP UNIVERSE</th>
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<tbody>
<tr>
<td>Beta</td>
<td>0.87</td>
<td>0.95</td>
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<tr>
<td>Avg. Quarterly Excess Return</td>
<td>0.45</td>
<td>0.23</td>
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<tr>
<td>Volatility</td>
<td>14.97</td>
<td>15.27</td>
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<tr>
<td>Tracking Error</td>
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<td>1.88</td>
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<tr>
<td>Upside Capture</td>
<td>101%</td>
<td>102%</td>
</tr>
<tr>
<td>Downside Capture</td>
<td>81%</td>
<td>94%</td>
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Source: Russell Investments

4 All portfolios are computed from the perspective of a domestic US investor: returns are in USD and do not include any currency hedging.
Closing thoughts: Moving towards de-risking assets

Incorporating a defensive mandate within a total Canadian equity allocation should be carefully considered and executed upon. Often the challenge with creating a defensive tilt in a focused mandate is identifying the options available for implementation. This is seen in the limited number of Canadian equity active managers that describe their investment style explicitly as defensive. Despite this challenge, we are beginning to see an increased number of options that move towards achieving this objective.

In summary, building portfolios using a risk-based approach has become more common amongst institutional investors as an important aspect of de-risking and better managing risk in general. In a well-diversified multi-asset portfolio, investors are looking for new ways to manage factor exposures and ultimately create more risk-efficient portfolios. Yet, we also believe that understanding individual risks within more focused mandates, such as Canadian equity, can provide greater resilience in down markets and better align with investor outcomes.

ABOUT THE RESEARCH

The underlying objective of this research topic was to: first, provide context for investors to determine if defensive investing in Canada aligns with their long-term objectives; and second, provide implementation options to deliver real portfolio outcomes. This paper formulates a basis for examining the characteristics and benefits of building a more defensive Canadian equity portfolio. Our next paper attempts to move beyond theory by exploring options for implementing.

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